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(21) International Application Number: PCT/EP99/03392 (22) International Filing Date: 17 May 1999 (17.05.99) (30) Priority Data: 98109688.6                      28 May 1998 (28.05.98)                      EP (71) Applicant (for all designated States except US): BAYER AKTIENGESELLSCHAFT [DE/DE]; D-51368 Leverkusen (DE). (72) Inventors; and (75) Inventors/Applicants (for US only): BURCHARDT, Elmar, Reinhold [DE/DE]; Damaschkeweg 69, D-42113 Wuppertal (DE). KROLL, Werner [DE/DE]; Pfaffenberger Weg 310, D-42659 Solingen (DE). GEHRMANN, Mathias [DE/DE]; Rosenstrasse 68, D-47918 Tönisvorst (DE). SCHRÖDER, Werner [DE/DE]; Am Rohm 91, D-42113 Wuppertal (DE). (74) Common Representative: BAYER AKTIENGESELLSCHAFT; D-51368 Leverkusen (DE).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>  (88) Date of publication of the international search report: 9 March 2000 (09.03.00)	
(54) Title: MONOCLONAL ANTIBODY AND ASSAY FOR DETECTING PIINP			
(57) Abstract			
<p>The present invention relates to monoclonal antibodies binding to the N-terminal procollagen (III) propeptide (PIIINP) molecule which is a proteolytic fragment emanating from the specific cleavage of procollagen (III) by N-proteinase after exocytosis and to an assay using these antibodies.</p>			

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## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>Le A 32 701PC Bu</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 99/ 03392</b>	International filing date (day/month/year) <b>17/05/1999</b>	(Earliest) Priority Date (day/month/year) <b>28/05/1998</b>
Applicant <b>BAYER AKTIENGESELLSCHAFT et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

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☒ filed together with the international application in computer readable form.

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☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

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2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 99/03392

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 6 C07K16/18 G01N33/577

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C07K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	RISTELI J ET AL: "Rapid equilibrium radioimmunoassay for the amino-terminal propeptide of human type III procollagen." CLINICAL CHEMISTRY, (1988 APR) 34 (4) 715-8. , XP002126427 cited in the application the whole document	1-5
A	EP 0 339 443 A (HOECHST AG) 2 November 1989 (1989-11-02) cited in the application column 1-6 example 6 claim 1 claim 8	1-5

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

21 December 1999

Date of mailing of the international search report

21/01/2000

Name and mailing address of the ISA

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International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
A	EP 0 298 210 A (HOECHST AG ;MAX PLANCK GESELLSCHAFT (DE)) 11 January 1989 (1989-01-11) cited in the application the whole document ---	1-5
A	EP 0 289 930 A (MAX PLANCK GESELLSCHAFT ;HOECHST AG (DE)) 9 November 1988 (1988-11-09) cited in the application column 1-5 example 7 claim 1 claim 8 ---	1-5
A	EP 0 089 008 A (HOECHST AG) 21 September 1983 (1983-09-21) cited in the application page 1-7 claim 1 ---	1-5
A	EP 0 004 940 A (MAX PLANCK GESELLSCHAFT) 31 October 1979 (1979-10-31) cited in the application page 1-8 claim 1 -----	1-5

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Information on patent family members

International Application No

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